

Common indicator plants of Missouri Upland Woodlands

Assembled by Susan Farrington (2010). Illustrations from Yatskievych (1999, 2006) and from Britton and Brown 1913.
Photographs by Dan Tenaglia from the www.missouriplants.com website (© Karen Tenaglia moflora@hotmail.com)
and also by Susan Farrington and Meg Timpe.

Asclepias tuberosa (butterfly weed)

Asclepidaceae

Stems **densely hairy**.

Leaves alternate, no leaf stalks, relatively thin, usually **hairy**, 2-10 cm long x 0.4-2.3 cm wide, **base of leaf usually deeply heart-shaped and clasping stem**.

Orange (or yellow) flowers in midsummer. Fruits 8-15 cm long, erect or ascending, surface minutely hairy.

Upland prairies, glades, savannas, mesic to dry woodlands, pastures, roadsides.



Blephila ciliata (Ohio horsemint)

Lamiaceae

Stems **minutely hairy with short, fine curved hairs**.

Leaves opposite, upper leaves **mostly narrowed to base**, up to 10 mm long, margins only **slightly toothed**.

Multiple round flower heads separated slightly toward top of stem, pale blue flowers with purple spots.

Open woodlands, limestone glades, bluff ledges, roadsides. Throughout much of Missouri.



Comandra umbellata (*C. richardsiana*) (bastard toadflax)

Santalaceae

Semi-parasitic on other plants. **Stems wiry**, smooth and leafy.

Leaves **yellow-green, smooth and waxy-feeling**, 2-5 cm long. **Leaves in middle of stem are largest**.

Flattened clusters of flowers at top of stem. White flowers in spring.

Dry or rock woodlands, upper slopes, ridges, glades, prairies, savannas. Throughout Missouri.

Compare with: *Euphorbia* species (they have milky sap), young *Vaccinium* species (woody stems).



***Coreopsis palmata* (finger coreopsis)**

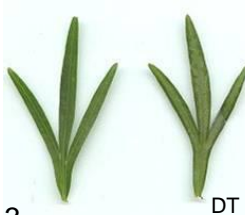
Asteraceae

Stems smooth or sparsely hairy with short, spreading hairs.

Leaves opposite, no or very short leaf stalks, 3 lobed from well above base of leaf, forming a "turkey foot", lobes sometimes lobed again. Lobe segments 2-7 mm wide, more or less same width throughout and not sharply pointed, smooth. Edges of leaves have very tiny teeth (roughened).

Yellow daisy flowers with yellow centers.

Dry habitats: prairies, glades, ledges and tops of bluffs, woodlands, roadsides. Throughout much of Missouri, but less common in glaciated regions and Mississippi Lowland division.



***Dalea purpurea* (purple prairie clover)**

Fabaceae

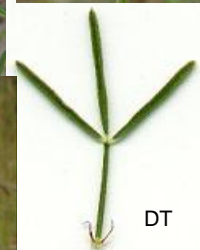
Stems smooth to thinly hairy.

Leaves alternate, divided into narrow needle-like segments, foliage is **very fragrant**.

Purple cylindrical flower heads.

Prairies, glades, open woodland.

Throughout MO except Mississippi lowland division.



***Desmodium rotundifolium* round-leaved tick-trefoil)**

Fabaceae

Stems sprawling across ground to 4 feet long, densely hairy to almost hairless.

Rounded leaves, **hairy**.

Flowers bluish or reddish purple.

Common plant of dry open woodlands throughout southern 2/3 of state

Easy to id due to **low spreading habit** and **rounded leaves**



Echinacea pallida (pale purple coneflower)

Asteraceae

Stems 18"-4' cm tall, sparsely to moderately **hairy with stiff, spreading hairs**.

Leaves alternate, moderately to densely **hairy** with stiff hairs, moderately to strongly **roughened** to touch. Basal lvs 8-35 cm long; stem lvs 4-25 cm long.

Pale pink to pink flowers. White pollen (present for only 1 or 2 weeks in early summer).

Upland prairies, glades, savannas, woodlands, roadsides. Throughout much of MO.

Compare with *Echinacea simulata* (glade coneflower), which is very similar and occurs in the **Eastern half of the Ozark and Ozark border divisions** on limestone and dolomite glades, tops of bluffs, savannas, woodlands, roadsides. It has **yellow pollen**, which is the only sure way to distinguish it (pollen only present for a few weeks). Either species is a good woodland indicator, and their leaves persist in overgrown woodlands.



Eryngium yuccifolium (Rattlesnake master)

Apiaceae

Stiffly upright flowering stems. Stems smell like carrots when crushed.

Leaves are edged with prickles.

Strongly **resembles a yucca plant**, but yucca does not have prickles.

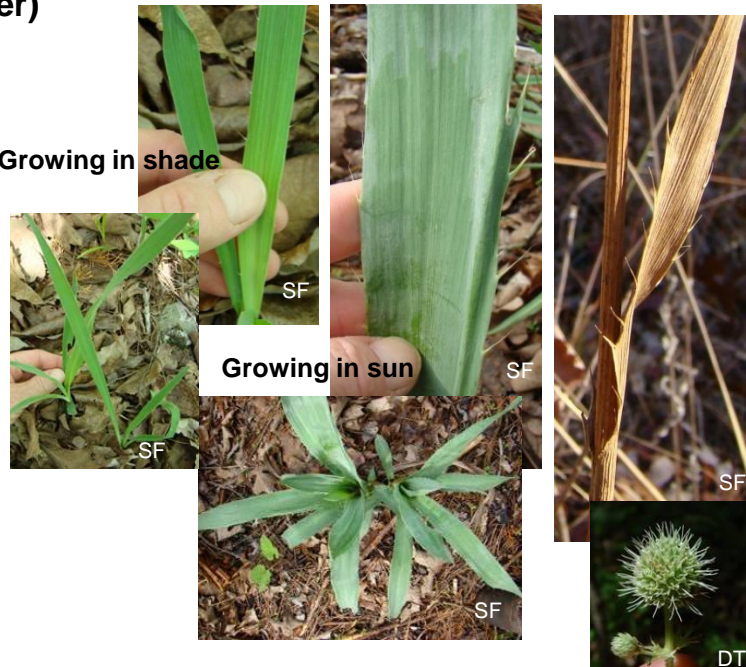
Flowers are white to off-white, packed in a tight flower head that is "bristly".

Found throughout Missouri. Grows in prairies and open woodlands.

Persists in overgrown woodlands as thin skinny leaves until sunshine is re-introduced.

Growing in shade

Growing in sun



Euphorbia corollata (flowering spurge)

Euphorbiaceae

Stems 6" to 3 feet tall, green to yellowish green or tan (rarely reddish to purplish tinged).

Leaves and stems **smooth or sparsely to moderately hairy** with slender, mostly spreading hairs. Leaves and stems **exude milky sap when broken**.

Leaves alternate below inflorescence branches, not crowded, with no leaf stalks or very tiny leaf stalks.. Leaf blades 1-6 cm long, unlobed, smooth edges.

White flowers in panicles at top of stem.

Upland prairies, glades, bluff tops and ledges, stream banks, pastures, roadsides. Throughout MO. 3



***Gentiana alba* (*G. flavida*) (pale gentian)**

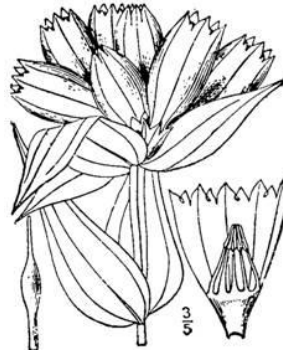
Gentianaceae

Smooth stems.

Leaves opposite, **firm**, sessile, **smooth**, 5-15 cm long x **1.5-5 cm wide**, often with **3 main veins**,

Greenish white to yellowish white tubular flowers in fall, mostly closed at top.

Rocky woodlands, bluff ledges, dolomite glades.



***Helianthus hirsutus* (bristly sunflower)**

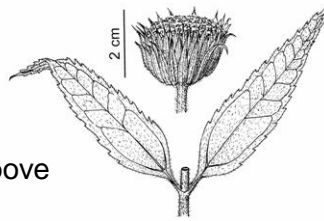
Asteraceae

Stems **sparsely to densely hairy** (at least above midpoint), not bluish-gray.

Leaves usually **all opposite** (including upper stem lvs), **distinct short leaf stalks (0.5-1.5 cm on larger lvs)** leaves **thick-textured and roughened**, smooth edged or finely toothed, larger lvs 4-15 cm long x 0.7 -9.0 cm wide.

Yellow flowers in late summer.

Mesic to dry upland woodlands, sand prairies, bluffs, banks of streams, rivers, pastures, disturbed areas. Throughout most of MO.



***Lespedeza virginica* (slender bush clover)**

Fabaceae

Upright stems, either unbranched, or branched above middle with erect branches. **Short, stiff hairs held tightly against stem, evenly distributed.**

Leaflets usually erect or strongly ascending, narrow, with short hairs, or hairless above. **Leaflet is tapered on both ends.**

Tends to grow in localized stands of individual stems. (Not usually branched).

Flowers nearly stalkless (**stalks shorter than leaves**), rose-pink to white w/pale lilac.

Rocky dry woodlands, stream margins, bluffs, prairies, glades, roadsides throughout Missouri.

Compare with *Lespedeza cuneata* (sericea lespedeza) – **EXOTIC INVASIVE**: squared off leaflet tips, multiple branches and white flowers.



Liatris aspera (rough blazing star)

Asteraceae

Stems 1-5' tall, moderately to densely hairy with short, curled hairs, sometimes smooth toward base

Basal & low stem leaves 6-25 cm x 4-25 mm, with short to long leaf stalks, **smooth to densely short-hairy**, green, 1 main vein, stem leaves 2-10 cm long, mostly without leaf stalks.

Flower heads relatively loosely to more densely spaced (stem visible between heads), no stalks, or stalks ≤ 8 mm

Bracts of flower head rounded, all but the innermost spreading or curved downward at tip, mostly with broad, thin, **transparent margins appearing swollen or pouched**, sometimes purplish.

Dry areas of prairies, glades, woodlands, roadsides. Throughout most of MO.



Liatris squarrosa (scaly blazing star)

Asteraceae

Stems 1-2 1/2' tall, smooth or hairy.

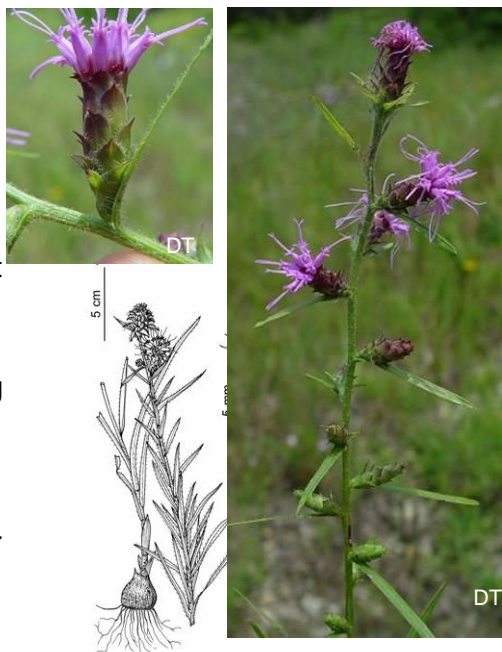
Basal and lower stem leaves 7-20 cm x 2-12 mm, with no leaf stalks or short stalks, narrow, **smooth or sparsely to moderately hairy with spreading, curly hairs**, green, 3-5 main veins, leaf edges usually light, hard, thickened and **sometimes sparsely hairy**. Stem lvs 3-15 cm, mostly without leaf stalks, very narrow.

Flower heads loosely spaced, with short stalks < 10 mm.

Bracts of flower head long-tapered to a sharp point, **tips spreading to curved downward**, margins slightly thickened, pale.

Glades, buffs, dry woodlands, prairies, roadsides. Throughout most of MO except western half of Glaciated Plains division.

Compare with *Liatris cylindracea*: very similar, but bracts of flower head are **pointing upward**. Also, the leaves are slightly longer (3-25 cm long), and usually without hairs or with hairs on underside only.



Lithospermum canescens (hoary puccoon, orange puccoon)

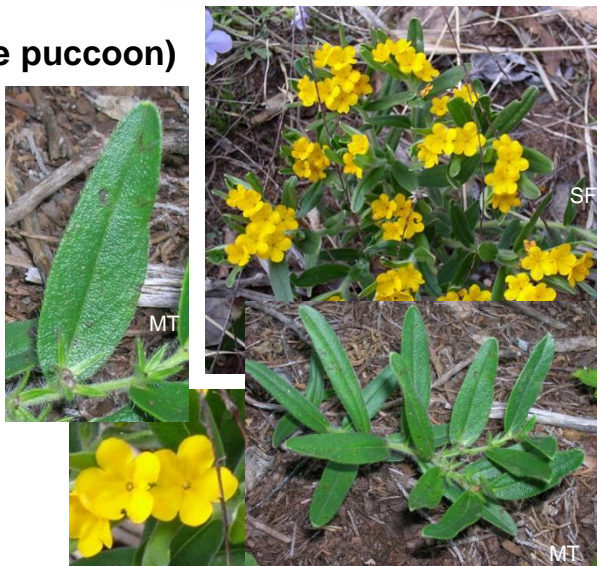
Boraginaceae

Perennial, rhizomes. Stems 10-40 cm, densely hairy with soft, slender, somewhat tangled hairs.

Stem leaves alternate, **grayish green**, 1-5 cm long x 3-12 mm wide, narrowly oblong to lanceolate, stalkless or very short leaf stalks, **densely hairy** with short, loosely ascending hairs.

Orange to yellow flowers, rarely pale yellow, corolla lobes entire. Flowers crowded into dense terminal clusters.

Glades, savannas, mesic and dry woodlands, upland prairies, bluff tops and ledges, roadsides.



***Parthenium integrifolium* (Wild quinine)**

Asteraceae

Stiffly upright, tall stems to 3 feet tall.

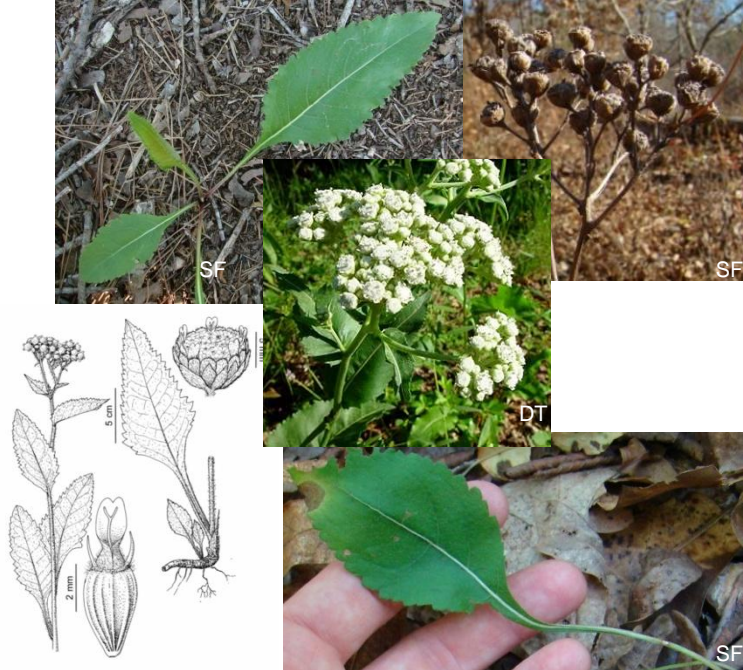
Alternate leaves. **Leaves are very scratchy rough and thick.** Basal leaves are large.

Small white flowers arranged in a more or less **flat-topped inflorescence.**

Blooms in early summer, and sporadically throughout summer.

Seed heads persist into winter and are easy to id.

Glades, prairies, woodlands, bluffs, pastures, roadsides. Grows throughout most of Missouri, except in far northwestern portion.



***Phlox pilosa* (downy phlox)**

Polemoniaceae

Upright to trailing stems to 60 cm, **hairy.**

Leaves opposite, **narrow**, about **4-10 x longer than wide**, **hairy**, **narrowed to sharp tip.**

Pink to purple flowers in spring.

Prairies, glades, savannas, dry woodlands, roadsides. Throughout most of Missouri except Bootheel.



***Pycnanthemum tenuifolium* (slender mountain mint)**

Lamiaceae

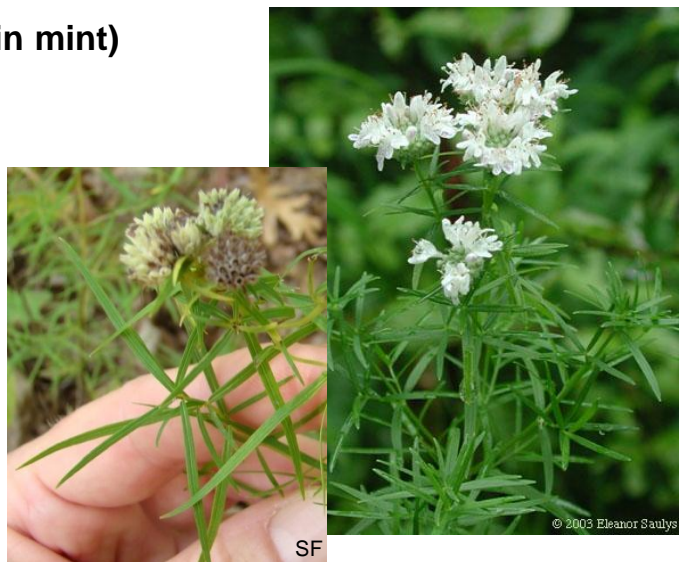
Upright stems, **smooth** (except possibly minute hairs on angles of stems)

Opposite leaves, **smooth**, extremely **narrow and linear**, **1.5-5.5 mm wide**, **very little aroma**, if any. Smaller leaves clustered in axils of larger leaves.

Densely packed off-white flower clusters.

Dry rocky woodlands, dry fields and prairies, wet thickets, meadows, alluvial ground and gravel bars, roadsides. Throughout Missouri.

Compare with *Asclepias verticillata* (which has milky sap).



***Silene regia* (royal catchfly)**

Caryophyllaceae

Upright, 2-4 feet tall.

Alternate leaves. Oval-elliptic, roughened-hairy or smooth.

Red flowers in **mid to late summer**.

Calyces (green tubes the flowers emerge from) are **sticky** to the touch.

Glades, upland prairies, mesic to dry woodlands, roadsides. Scattered in Ozark and Ozark Border divisions and uncommon along southern edge of Unglaciaded Plains division.

Compare with ***Silene virginica* (firepink)**: low growing, blooms in spring. See description in Acidic woodland indicator section (page 15)

Sticky
calyx



***Silene stellata* (starry campion)**

Caryophyllaceae

Stems 1-3' tall, slender and wiry, moderately to densely hairy with short, spreading to downward-curved hairs or smooth toward base.

Stem leaves in whorls of 4, with no stalks or short stalks, smooth. Basal leaves usually absent at flowering.

White bell-shaped flowers with fringed margins.

Bottomland to mesic to dry woodlands, slopes, savannas, bottomland prairies, stream banks.



***Silphium integrifolium* (rosinweed)**

Asteraceae

Stem **smooth or mod to densely hairy with relatively short** (0.1-0.5 mm) slender to stout **hairs**. May be bluish-gray.

Opposite leaves (sometimes slightly alternate or whorled), usually **thick** and **sometimes leathery**, smooth or moderately to densely **roughened** or hairy. Leaf shape variable from narrow to more oval.

Yellow flowers in late summer.

Upland prairies, mesic to dry woodlands, bluffs, glades, banks of streams, rivers, pastures, roadsides. Scattered throughout most of MO.

Compare with *S. asteriscus* (starry rosinweed): alternate leaves, long hairs on stem, often coarsely toothed and ***Helianthus mollis* (ashy sunflower)**: longer hairs on stem, leaves turn black when bruised.



***Silphium terebinthinaceum* (Prairie dock)**

Huge basal leaves make this plant very easy to recognize.

Leaves turn dark and shrivel in winter, but persist.

Winter leaves appear silvery speckled, somewhat like a speckled king snake!

Flower spikes rise very high above the leaves (up to six feet or more). Flowers are yellow daisies, appearing in late summer/fall.

Glades, prairies, open woodlands, fens, roadsides. Associated with dolomite rock substrate. Occurs throughout southern 2/3 of Missouri.



***Solidago petiolaris* (downy goldenrod)**

Asteraceae

Stems **sparsely to moderately hairy with short, curved or stiff hairs**.

Lower leaves 6-12 cm long x 0.5-3.5 cm wide, 3 to 8 x longer than wide, **relatively thick** and stiff. Margins entire or sparsely shallowly toothed above midpoint and hairy. Leaf surfaces **sometimes sticky** and somewhat shiny. Upper surface **smooth or somewhat roughened**.

Glades, bluffs, mesic to dry woodlands, roadsides. Scattered mostly south of the MO river.



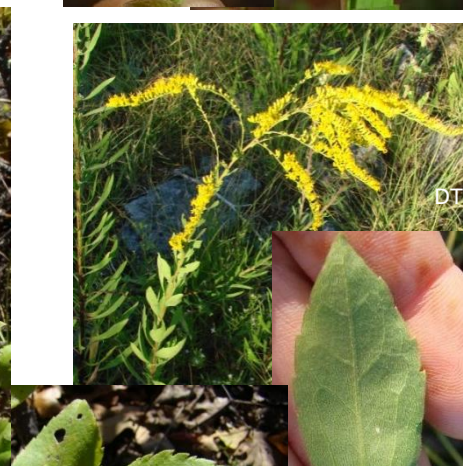
***Solidago radula* (rough goldenrod)**

Asteraceae

Stems **moderately to densely hairy with short, stiff, mostly spreading hairs** 0.1-0.6mm.

Lower leaves 3-10 cm long x 0.7-2.5 cm wide, mostly 4 to 6x longer than wide, somewhat **thickened and stiff**. Margins sharply but finely toothed to shallowly scalloped or nearly entire, roughened to hairy. **Surfaces sparsely to moderately roughened** with short, mostly spreading hairs.

Mesic to dry woodlands, ledges and tops of bluffs, glades, roadsides, rarely upland prairies. Scattered mostly in southern half of state, but also parts of northern MO. Absent from most of Mississippi Lowlands division.



***Solidago rigida* (stiff goldenrod)**

Asteraceae

Stems **moderately to densely hairy with short, curved hairs**, rarely nearly glabrous below inflorescence

Basal leaves 8-20 cm long x 1.8-4.0 cm wide, tapered to long leaf stalks. Margins finely scalloped or minutely or bluntly toothed.

Surfaces moderately to densely hairy with short curved hairs (somewhat roughened).

Prairies, woodlands, glades, roadsides.

Scattered throughout state but uncommon in eastern Ozarks, and absent from Mississippi Lowlands.

Note: Young plants of *Silphium terebinthinaceum* and *Solidago rigida* can look similar. Compare leaf margins (scalloped (rounded teeth) for *S. rigida*)



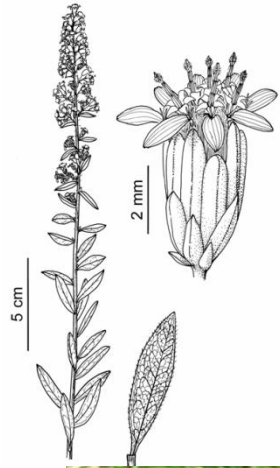
***Solidago speciosa* (showy goldenrod)**

Asteraceae

Stems **nearly glabrous (smooth)** below inflorescence.

Basal leaves 5-30 cm long x 1-10 cm wide, mostly 2-6 x long as wide. Margins entire to shallowly toothed and inconspicuously hairy. **Surfaces glabrous.**

Prairies, bluffs, mesic to dry woodlands, glades, roadsides, rarely swamps (mainly upland species). Scattered throughout state, but uncommon in Ozark region.



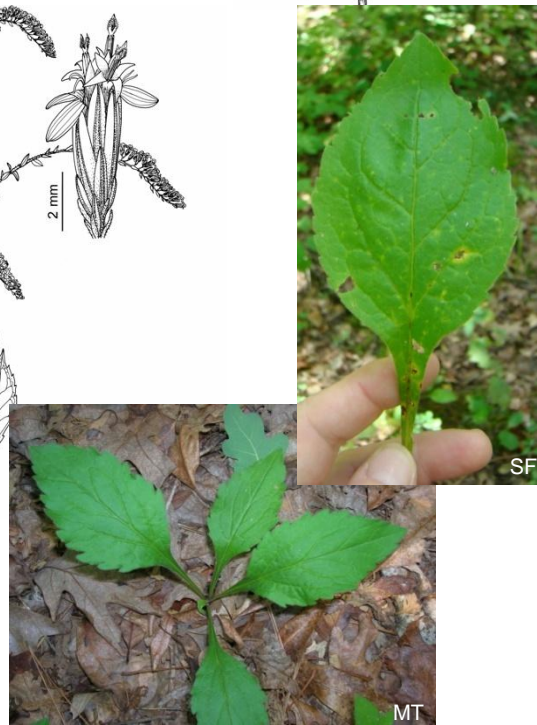
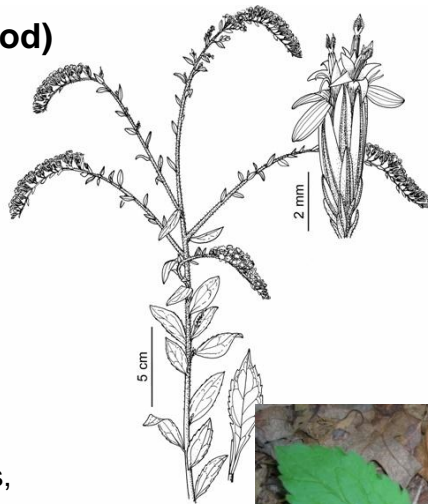
***Solidago ulmifolia* (elm-leaved goldenrod)**

Asteraceae

Stems **glabrous below inflorescence or moderately hairy with mostly spreading hairs** 0.5-1.5 mm

Basal leaves 6-12 cm long x 2-5 cm wide. Margins sharply toothed and inconspicuously hairy. **Surfaces sparsely to moderately hairy with spreading or curving hairs**, upper surface often **roughened**.

Common and variable species of woodlands, glades, bluffs, margins of ponds and sinkhole ponds, acid seeps, roadsides.



Symphyotrichum anomalum (formerly *Aster anomalus*)

Asteraceae

Stems moderately to densely roughened w/ short, spreading hairs.

Upper leaf surface slightly rough to soft-hairy with coarse, stiff hairs. Basal and lower leaves tend to be **deeply heart-shaped, 4-10 cm long** x 2.0-5.5 cm wide, long leaf stalks, sometimes narrowly winged. Margins entire or slightly irregular, with a few small teeth.

Bracts of flower heads with tips spreading to reflexed. Purple to blue ray flwrs (rarely white).

Glades, prairies, mesic to dry rocky woodlands, ledges and tops of bluffs, roadsides. Scattered in state, but mostly in Ozark and Ozark Border divisions.



DT



DT



SF

Symphyotrichum oolentagiense (formerly *Aster azureus*) (Azure aster)

Asteraceae

Stems smooth or sparsely to moderately roughened with short, spreading hairs in bands, mostly toward stem tip.

Upper leaf surface rough with firm, stiff hairs. Basal and lower leaves tend to be **shallowly heart-shaped, 4-18 cm long** x 1-5 cm wide, long leaf stalks, sometimes narrowly winged. **Upper leaves quickly become long and narrow** (not heart-shaped). Margins entire or with a few, minute, widely spaced teeth.

Bracts of flower heads with tips erect or ascending. Lavender to purple to blue ray flowers (rarely pink or white).

Glades, prairies, mesic to dry rocky woodlands, ledges and tops of bluffs, roadsides. Scattered nearly throughout state.



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Symphyotrichum turbinellum (*Aster turbinellus*) (prairie aster)

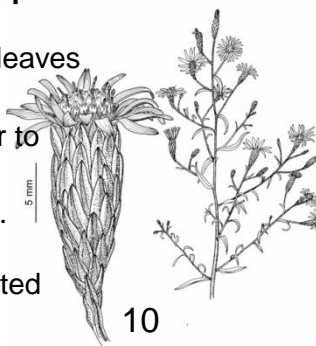
Asteraceae

Stems sparsely hairy toward tip, usually in bands (sandpapery), **smooth toward base.**

Leaf margins entire or sparsely toothed & roughened. **Upper leaf surfaces often shiny, smooth;** undersurface sparsely **roughened** with short, stout hairs. Basal leaves **4-12 cm long** x 0.5-2.0 cm wide.

Large flower heads (7-12 mm long), ray flowers lavender to purple to bluish purple. Bracts 1 mm wide or more.

Woodlands, glades, ledges and tops of bluffs, roadsides. Often on **acidic substrates.** Throughout much of Missouri except absent from western half of Glaciated Plains Division.



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***Taenidia integerrima* (yellow pimpernel)**

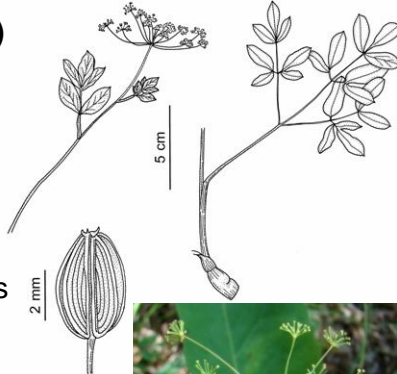
Apiaceae

Stems 12-30" tall, **smooth, bluish-gray**, usually **purple-tinged** toward base.

Leaves alternate, short to long leaf stalks, leaves divided into leaflets which are further divided into 2 or 3 parts. Leaflets 1-4.5 cm long, **smooth and bluish-gray on undersurface**.

Yellow flowers late spring to early summer.

Upland prairies, glades, tops and ledges of bluffs, mesic to dry woodlands, savannas, stream banks. Nearly throughout state.



***Verbesina helianthoides* (yellow crownbeard, wingstem)**

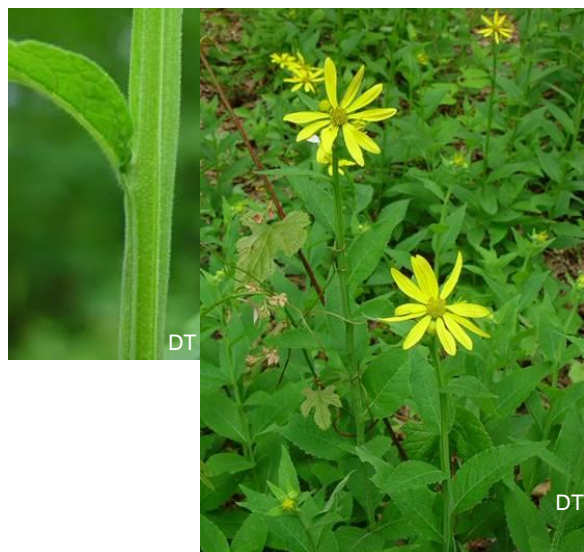
Asteraceae

Stems narrowly and sometimes incompletely **winged**, moderately to densely hairy with short, fine, loosely ascending hairs.

Leaves without stalks or with short, often poorly differentiated stalks. **Leaves widest close to middle, tapering gradually to both ends**. Upper surface mod to densely hairy with **relatively soft (sometimes slightly roughened)**, spreading hairs.

Large yellow flowers in early to mid summer.

Found mostly in drier upland habitats: prairies, mesic to dry woodlands, glades, roadsides. Southern MO and scattered in northern MO.



***Viola pedata* (bird's foot violet)**

Violaceae

Basal rosettes of leaves and flowers, up to 6" tall.

Leaves deeply divided into narrow lobes, **resembling a bird's foot**, often further divided into smaller lobes.

Bare flower stems arise from base of plant. Lilac to purple flowers, **often 2-toned**.

Dry rocky woodlands on upland slopes and ridges, prairies, glades, roadsides. Throughout much of MO, but sparse in western end of Glaciated and Unglaciated Plains Divisions.



Common indicator plants of Acidic Missouri Woodlands

Aureolaria grandiflora (*Gerardia grand.*)(yellow false foxglove)

Scrophulariaceae

Semi parasitic plants. Stems 18" to 3' tall, widely branched, densely hairy w/ short gray hairs.

Opposite leaves, short leaf stalks, lower leaves deeply divided, upper leaves much smaller than lower leaves and less divided.

Large showy yellow tubular flowers in early to mid summer. Dried seed heads persist long into winter.

Dry or rocky **acidic** woodlands, bluffs, borders of glades. Throughout much of MO except SE and NW sections.



Baptisia bracteata (Cream wild indigo)

Fabaceae

Sprawling to upright plant, 12-24" tall. Stems often hairy and purplish.

Each leaf is composed of 3 leaflets and 2 small bracts that look like 2 tiny leaflets.

At least some part of the plant (leaves, stems, flowers or young fruit) will be **hairy**.

Flowers are **creamy light yellow** and are held **horizontally**.

Blooms in late spring, early summer.

Fruits are large "**pea**" **Pods** that **turn black by winter**. Even dried plants are distinctive and identifiable all winter (grey and stiff).

Rocky open woodlands, prairies, usually in **acidic** soils. Throughout most of Missouri.



Cunila origanoides (Dittany)

Lamiaceae

Low growing dainty plant, branching freely.

Square stems.

Small opposite leaves have **minty fragrance**, even in winter. Traditionally brewed as tea for medicinal and culinary uses.

Tiny lavender flowers in autumn.

One of only a few plants in Missouri that make "**frost flowers**".

Found in **acidic woodlands**. Occurs throughout southern 2/3 of Missouri; not found in plains regions.



Gillenia stipulata (*Porteranthus stipulatus*) (Indian physic)

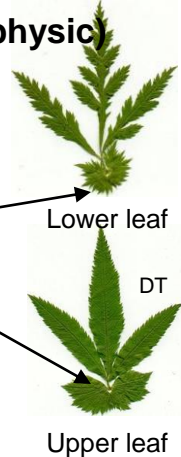
Rosaceae

Stems 1-3 feet tall, thinly hairy.

Leaves alternate, lower leaves deeply lobed with narrow toothed segments. **Large leaf-like stipules** at base of leaves, coarsely or deeply toothed.

White flowers.

Dry rocky woodlands and ridgetops, usually on **acidic substrates**.



Ionactis linariifolius (*Aster linariifolius*) (stiff aster)

Asteraceae

Stems erect, 6-24" tall, nearly smooth with fine, longitudinal lines, may be sparsely hairy with minute curled hairs toward base of stem and moderately to densely hairy toward tip of stem.

Leaves very narrow, **stiff and leathery**, often **glossy**, margins strongly **roughened**.

Lavender to purple flowers in fall.

Mesic to dry upland woodlands, usually on **acidic substrates**, savannas, bluff ledges, margins of glades, roadsides. Scattered in Ozark and Ozark Border divisions.



Lespedeza hirta (hairy bush clover)

Fabaceae

Tall upright stems with **long yellow-brown spreading hairs**.

Leaflets oval to rounded, variously hairy, but often covered with **conspicuous spreading hairs** (may be hairless on upper surface). Leaf stalks of main leaves mostly 5-20 mm long.

Cream-colored to yellowish-white flowers. Rocky open woods, glades. **Acidic soils**. Southern MO.



Lespedeza procumbens (Trailing bush clover)

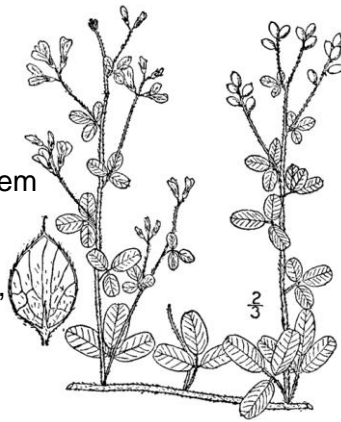
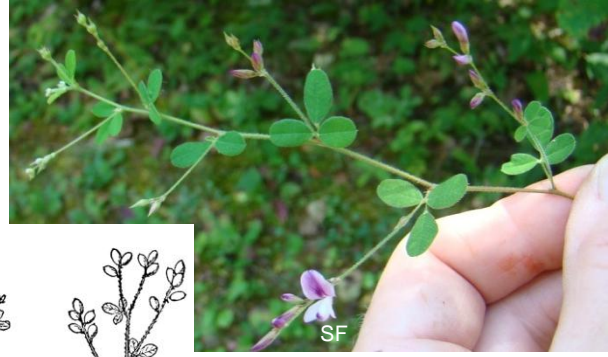
Fabaceae

Spreading, clumpy, trailing along ground (new growth upright). **Hairs on stem conspicuous and spreading (sticking out).**

Leaflets rounded, of equal size, undersides covered with dense spreading hairs.

Acidic substrates of dry rocky woodlands.

Compare with *Lespedeza repens* (hairs on stem are held tightly against stem, not sticking out). Other legumes (e.g. *Strophostyles*, *Amphicarpaea* and *Galactia*) look similar, but are twining from an early age. *Lespedeza* doesn't twine.



Monarda bradburiana (Horsemint)

Stiff upright **square stems**, about 1-2' tall.

Relatively large opposite leaves, with little or no leaf stalk, **very fragrant** (most leaves gone in winter, and no longer fragrant).

Large rounded flower heads with pale purple tubular flowers **dotted with darker purple**. Flower heads are **terminal** on the stem and usually **solitary**. Blooms in **late spring**.

Acidic soils of sandstone, chert or igneous rock in rocky woodlands and borders of glades. Occurs throughout southern 2/3 of Missouri; not found in plains regions.

Compare with *Monarda fistulosa*, which is taller, has distinct leaf stalks 1-1.5 cm long, and blooms in mid summer.



Orbexilum pedunculatum (formerly *Psoralea psoraliodes*) (Sampson's snakeroot)

Fabaceae

Erect multiple stems, **creeping rhizomes**

Alternate three-parted leaves, leaflets of lower leaves notched at tip and broader; leaflets of upper lvs narrower; **terminal leaflet usually on longer stalk than lateral leaflets.**

Awl-shaped stipules at base of leaf stalk, 7-8 mm long, 2 mm wide at base, parallel veins.

Lavender flowers on **long stalks**.

Acidic soils of rocky open woods, glades and prairies. Mostly in southern MO.



Silene virginica (fire pink)

Caryophyllaceae

Stems sprawling to upright, 1-2', **moderately to densely hairy with sticky hairs**.

Basal leaves usually absent at flowering (but rosettes often adjacent to blooming stalks), short to long leaf stalks, (**edges of leaf stalks with several spreading hairs**), stem leaves opposite, without leaf stalks, 1-12 cm long, **smooth or short sticky-hairy**.

Red flowers in mid-late spring. Calyx tube **very sticky**.

Bottomland and mesic upland woodlands, stream banks, bluff ledges and bases, pastures, roadsides.



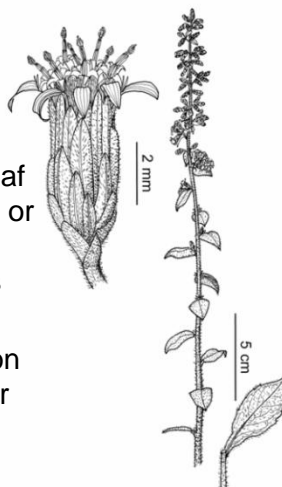
Solidago hispida (hairy goldenrod)

Asteraceae

Stems **moderately to densely hairy w/ fine, spreading hairs**, often 1mm or longer.

Basal leaves 6-20 cm long x **1.6-6.0 cm wide**. Leaf margins variable (almost entire to scalloped or toothed). **Surfaces densely to moderately hairy with fine hairs**. Median and stem lvs narrower than basal leaves.

Mesic to dry woodlands, bluffs, roadsides, often on **acidic substrates**. Ozark and Ozark Border divisions of MO.



Symphotrichum patens (*Aster patens*) (spreading aster)

Asteraceae

Stems evenly and moderately to densely hairy (often roughened) with short, upward-curved hairs.

Leaf bases clasping stem. Leaf margins entire or sparsely toothed. Margins and leaf surfaces **dark green, moderately roughened** with/ short, stiff, curved hairs.

Ray flowers purple to bluish purple.

Woodlands, upland prairies, glades, fields, roadsides, usually on **acidic substrates**. Mostly in southern MO.



Tephrosia virginiana (goat's rue)

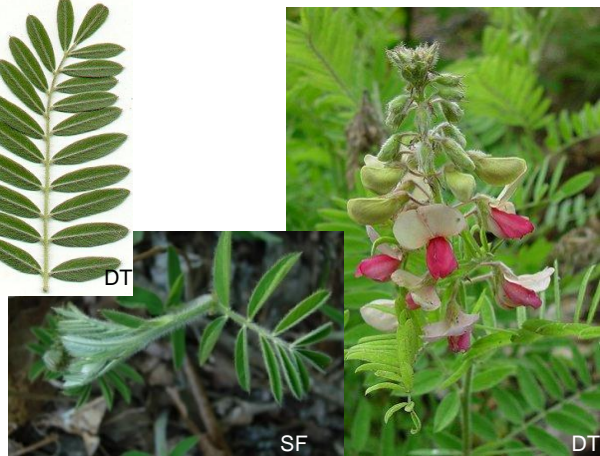
Fabaceae

Stems erect to reclining or sprawling, 8-24". **Densely hairy with long gray silky hairs**.

Leaves alternate, divided into many pairs of opposite leaflets. Leaflets 1-3 cm long, **with long silky hairs underneath, softly hairy above**.

Showy pink and white flowers.

Dry rocky habitats on acidic substrates: rocky open woods, glades, prairies. More common south of MO river, but also found in northeastern and northcentral MO.



Three common GRASSES of Missouri Woodlands:

Andropogon gerardii (Big Bluestem)

Poaceae

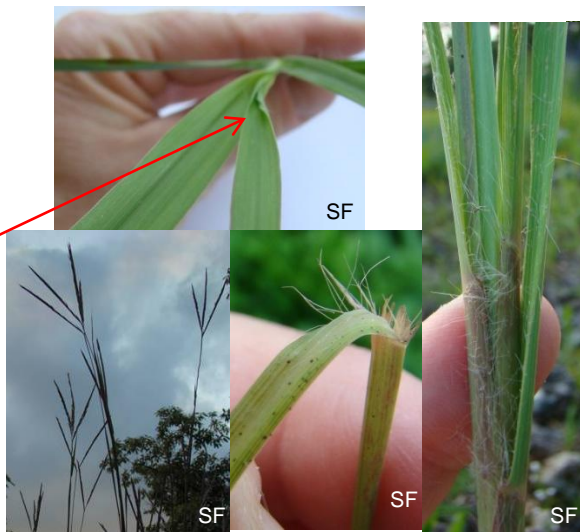
Flowering stems 2-9 feet tall, **rounded at base**, hairless, usually bluish-gray.

Leaves **usually hairy** toward base.

Newest leaf emerging at center is rolled, not folded.

Turkey-foot inflorescence. **Short white or yellow hairs** on joints of inflorescence axis and spikelets.

Upland prairies, glades, savannas, dry woodlands, pastures, roadsides. Throughout Missouri.



Schizachyrium scoparium (*Andropogon scoparius*) (little bluestem)

Poaceae

Flowering stems 1 to 4 feet tall, slightly flattened or rounded at base, hairy or not hairy, often bluish-gray.

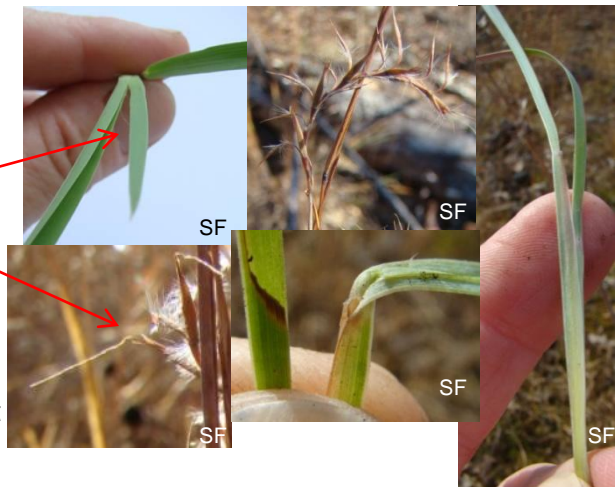
Leaves hairy or smooth at base, green or bluish-gray.

Newest leaf emerging at center is folded, not rolled

Seeds with awns spirally twisted and bent at base.

Upland prairies, glades, savannas, woodlands, fields, roadsides. Throughout MO.

Compare with *Andropogon virginicus* (broom sedge): yellow green fan-shaped culms, prominent hairs behind ligule, awns on seeds are straight, not bent.



Sorghastrum nutans (Indian grass)

Poaceae

Flowering stems 2-7 feet tall, rounded at base, **hairy at nodes**.

Leaves resemble **"rabbit ears" antennas**, because a **hardened pointy ligule** at the base of the leaf sheath pushes the leaves to either side of it. Also, where blades meet the stem, the sheath wraps around the stem to form short auricles (ears) on either side.

Inflorescence is often nodding. **Short light yellow to golden yellow hairs** (gray w/age) on joints of inflorescence axis and spikelet stalks.

Upland prairies, glades, savannas, woodlands, fields, roadsides. Throughout MO.

